Appendix 3: Quality Assessment [posted as supplied by author]

A) Quality of included studies of earache

Randomised controlled trials

Study	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessor	Incomplete outcome data	Selective reporting	Overall risk
Burke 1991	Low – computer generated randomisation	Low – randomisation code was not shared with investigators	Low – parents, patients, and investigators blinded	Low – parent blinded	Unclear – explanation for exclusions only available for 1 study site	Unclear – unable to determine	Low
Damoiseaux 2000	Low – computer generated randomisation	Low – central allocation by pharmacy	Low – parents, patients, and investigators blinded	Low – all blinded	Low – missing data explained and were similar between groups	Low - all outcomes appear to be presented	Low
Hoberman 2011	Unclear – method not described	Low – central allocation by pharmacy	Low – parents, patients, and investigators blinded	Low – all blinded	Low – missing data explained	Low - all outcomes appear to be presented	Low
Le Saux 2005	Low – computer generated randomisation	Low – central allocation by pharmacy	Low – parents, patients, and investigators blinded	Low – all blinded	Low – missing data explained	Unclear – unable to determine	Low
Mygind 1981	Unclear – method not described	Unclear – method not described	Unclear – method not described/unable to determine	Unclear – unable to determine	Unclear – missing data not explained	Unclear – unable to determine	Moderate
Neumark 2007	Low – computer generated randomisation	High - participants and clinicians knew group assignment	High – no blinding (open trial)	High – no blinding (open trial)	Unclear – unable to determine follow-up rate among control group participants	Unclear – unable to determine	High
Tahtinen 2011	Low – computer generated randomisation	Low – central allocation by pharmacy	Low – parents and study physicians were blinded	Low – parents and study physicians were blinded	Low – missing data explained	Low - all outcomes appear to be presented	Low

Observational studies*

Study	Cohort selection	Classification	Measurement	Adequate follow-up	Other biases	Overall risk
Greenberg 2003	Low – consecutive enrolment in 3 primary care clinics	Unclear – diagnostic criteria not described	Low – parents telephoned every 2-3 days to report symptoms	Low – 150 of 160 followed-up	-	Low
Smith 2010	Unclear - exclusion criteria not reported	Unclear – diagnosis by nurse assessment, but criteria not reported in study	Low – parents recorded symptoms on daily basis	Low – 100% follow-up of children with ear discharge, 94% follow-up of children without ear discharge	-	Moderate

*For risk of bias of Jedrychowski, 2005, see data in sore throat section.

B) Quality of included studies of sore throat

Randomised controlled trials

Study	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessor	Incomplete outcome data	Selective reporting	Overall risk
Bulloch 2003	Low – "table that was block randomized in groups of 10"	Low – pharmacy-controlled randomization	Low – no blinding needed for study patients or parents; study personnel blinded	Low – research assistants performing follow-up calls were blinded	Low – missing outcome data low and balanced between groups	Unclear – unable to determine	Low
Chapple 1956	Low – random number series used	Low – "key to the random series was the only guide to the contents of each bottle, and no copy of this was held by the practitioners"	Low – clinician, patients, parents blinded	Low – clinician blinded	Unclear – signs and symptoms were not assessed in patients <5 yrs of age because "symptoms were probably less reliable"	Unclear – unable to determine	Low
Nelson 1984	High – "terminal digit of their hospital number was odd or even."	High – allocation determined by case record number	High – "investigator was not blinded as to the treatment given"	Unclear – not addressed	Low – missing data explained	Unclear – unable to determine	High
Olympia 2005	Low – "computerized random numbers table for block randomization"	Low – central allocation by research pharmacist	Low – blinding of parents, patients, and ED physician	Low – parent blinded	Low – missing outcome data explained, balanced between groups	Unclear – unable to determine	Low
Ruperto 2011	Low – computer-generated random number sequence	Unclear – method not reported	Low – parents and clinicians blinded to paracetamol and placebo assignment	Low – clinicians blinded	Low – 100% follow-up	High – authors do not report number of children that received antibiotics	Moderate
Zwart 2003	Low – computer-generated random number list used	Low – central allocation by pharmacist	Low – blinding of parents, patients, and clinicians	Low – parent blinded	Low – missing data explained, balanced across groups	Unclear – unable to determine	Low

Observational studies

Study	Cohort selection	Classification	Measurement	Adequate follow-up	Other biases	Overall risk
Jedrychowski 2005	Low – unselected infants enrolled prenatally	Unclear – no diagnostic criteria used in determining symptom duration	Unclear – symptom duration data collected during interview every 3 months (subject to mothers' recall?)	Low – 8 children lost to follow-up over year	High – authors note that air quality in study area (Krakow) was very poor and not comparable to other major cities	Moderate

C) Quality of included studies of cough

Randomised controlled trials

Study	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessor	Incomplete outcome data	Selective reporting	Overall risk
Bernard 1999	Unclear – method not described	Unclear – method not described	Low – parents, physicians, investigators, and patients blinded	Low – all blinded	Unclear – no explanation of withdrawals	Unclear – unable to determine	Moderate
Bjornson 2004	Low - computer-generated randomization	Low – central allocation by pharmacy	Low – study described as double-blind but no method provided	Low – study described as double-blind but no method provided	Low – low loss to follow-up; exclusions explained	Unclear – outcomes related to parent stress and child sleep are discussed briefly but not presented	Low
Cruz 1995	Unclear – method not described	Low – central allocation by pharmacy	Low – parents and investigators blinded	Low – parents blinded	Unclear – follow-up in each arm unclear	Unclear – unable to determine	Low
Geelhoed 1996	Unclear – method not described	Unclear – method not described	Unclear – method not described	Unclear – method not described	Unclear – unclear if other medications were taken/allowed	Unclear – "other reason" for seeking additional medical care not reported	Moderate
Patel 2003	Low – computer-generated randomization	Low – central allocation by pharmacy	Low – personnel and parents blinded	Low – parents blinded	Low – data reported	Unclear – unclear if other medications were taken/allowed	Low
Plint 2009	Low – computer-generated randomization	Low – central allocation by pharmacy	Unclear – study described as double-blind but no method provided	Unclear – study described as double-blind but no method provided	Low – no losses to follow-up	Low – outcomes presented	Low

Observational studies*

Study	Cohort selection	Classification	Measurement	Adequate follow-up	Other biases	Overall risk
Hay 2003	Low - consecutive enrolment at several GPs	Unclear – cough was main reason for consultation for 66% of children and not all children had upper respiratory tract infection; no diagnostic criteria used	Low – parents used a validated symptom diary that was modified for current study	Low – 228/256 (89%) of children had follow-up data on cough duration; follow-up until cough resolution (2 days with no symptoms)	-	Low
Hay 2007	Low – consecutive enrolment at several GPs	Unclear – cough was main reason for consultation for 66% of children; no diagnostic criteria used	Low – parents used a validated symptom diary that was modified for current study	Low – 154/164 (94%) of children had follow-up data on cough duration; follow-up until cough resolution (2 days with no symptoms)	-	Low
Kusel 2007	Low – unselected infants enrolled prenatally	Unclear – no diagnostic criteria used in determining symptom duration	Low – parents recorded daily symptoms in a diary and reported data during bi-weekly phone calls	Low – half of children were lost to follow-up during 5 yr period, but "no significant differences were seen in the number of ARI encountered in the first full year between those who remained in the study for the full 5 years and those who withdrew after the first year"	High – children selected for their increased risk of atopy	Moderate
Petruzella	High – convenience	Low – diagnostic criteria used	Low – parents recorded daily	Low – 8 lost to follow-up, 4 weeks of	-	Moderate

2010	sampling		symptoms in a diary and reported data during weekly phone calls (4 weeks total)	follow-up		
Plint 2004	Low – consecutive enrolment at multiple PEDs	Low – diagnostic criteria used	Low – parental recall at 2-3 weeks	High – 69% follow-up	Unclear – substantial use of active treatments, may limit generalizability	Moderate

*For risk of bias of Jedrychowski, 2005, see data in sore throat section.

D) Quality of included studies of common cold and non-specific respiratory tract infection

Randomised controlled trials

Study	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessor	Incomplete outcome data	Selective reporting	Overall risk
Hutton 1991	Unclear – method not described	Unclear –not described	Unclear – parents in treatment and placebo groups were unaware of assignment; parents in no treatment group were aware	Low – outcomes were assessed by individual unaware of group assignment	Low – high follow-up rates for both placebo and no treatment groups	Unclear – unable to determine	Moderate
Kristo 2005	Low – block randomization	Unclear – unable to determine	Unclear – unable to determine	Unclear – unable to determine	Low – high follow-up	High – use of other medications was recorded but not reported in study	Moderate
Macknin 1998	Low – "computer-generated randomization code"	Low – central allocation by pharmacy	High – personnel were blinded; but authors note that zinc and placebo lozenges looked different	Unclear – students and parents assessed outcomes and it would have been possible to determine group assignment based on appearance of lozenge	Unclear – unclear if other medications were used	Low – outcomes presented	Moderate
Taylor 2003	Low - "computer-generated randomization list"	Low – children given "unique study number" to assign treatments	Low – children, parents, clinicians, and investigators were unaware of allocation and treatments were similar-looking	Low – parents blinded	Low – data excluded from analysis explained	Low – outcomes presented	Low

Observational studies*

Study	Cohort selection	Classification	Measurement	Adequate follow-up	Other biases	Overall risk
Butler 2003	Low – sample comes from randomised controlled trial	Unclear – inclusion was based on clinician opinion as to whether infection was caused by a virus	Low – parents recorded symptoms daily in a diary	High – 169 of 290 followed-up	-	Moderate
Carabin 2000	Low – open enrolment at multiple day care centres	Low – diagnostic criteria used (provided in parent calendar)	Low – parents recorded daily symptoms in a calendar and reported data during biweekly phone calls	Unclear – unable to determine	-	Low
Grüber 2007	Low - infants enrolled at birth	Unclear – unable to determine what constituted "common cold"	Low – parents recorded daily symptoms in a calendar and reported data during monthly interviews	Unclear – unable to determine number followed-up for data on common cold duration	-	Moderate
Jacobs 2000	Low – consecutive enrolment at multiple primary care clinics	Low – diagnostic criteria used	Low – parents recorded daily symptoms in a symptom diary based on a standardized scale	Low – 206/220 followed-up	-	Low

Kristo 2006	Low – open enrolment among schoolchildren	Low – diagnostic criteria used	Low – parents recorded symptoms in a diary	Low – 80/82 followed-up	-	Low
Mitra 2011	Low – unselected schoolchildren randomly recruited	Unclear – unclear if diagnostic criteria were used in determining symptom duration	Low – parents recorded daily symptoms in a symptom diary based on a standardized scale	High – 223/570 returned symptom diaries	-	Moderate
Pappas 2008	Unclear – recruitment not described	Low –criteria provided on parental diary sheet	Low – parents recorded daily symptoms on diary sheets	Unclear – unable to determine	-	Moderate
Samet 1993	Low - infants enrolled at birth	Low – diagnostic criteria used	Low – parents recorded daily symptoms in a symptom diary	Low - 1,209 of 1,315 followed-up	-	Low
Steinweg 1983	Low – consecutive enrolment	Low –criteria used to distinguish purulent from clear rhinorrhea	Low – parents reported symptom information (presence/absence) to study interviewer every 2 days via telephone	Low – 40 of 40 followed-up	Unclear – medication use recorded but data not provided in study	Low
Taylor 2010	Unclear – recruitment methods not described	Low – symptomatic criteria and diagnostic criteria used	Low – parents recorded daily symptoms in a symptom diary	Low – 99% follow-up, and explanations provided for data not included in analysis	Unclear if children were given cold medication	Moderate
Turner Cobb 1998	Low – unselected schoolchildren recruited	Low – upper respiratory infection had to be clinically verified by trained researcher	Low – children recorded symptoms in diary daily and illnesses were clinically verified	Low – data presented for all children with clinically verified upper respiratory infection	-	Low
von Linstow 2008	Low – children were enrolled postnatally, 20 per month, to include an equal number of children born in all seasons	Low – diagnostic criteria used	Low – parents recorded daily symptoms in a symptom diary and were visited monthly to check on participation	Low – 217 of 228 followed-up	-	Low
Wald 1991	Low – unselected infants born at one hospital recruited	Low – diagnostic criteria used	Unclear – some risk of bias due to parental recall (data collected from parents every 2 weeks)	Unclear – only data from children remaining in pre-specified day care arrangement were included in analysis	-	Low

*For risk of bias of Jedrychowski, 2005, see data in sore throat section; for Kusel, 2007, see data in cough section.